Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method of manufacturing an optical module including a transparent substrate having an electro optical element on one surface side and an optical transmission line support member, which is arranged on the other surface side of the transparent substrate and supports one end of an optical transmission line, the method of manufacturing the optical module comprising the steps of:

forming a guide pin in either the transparent substrate or the optical transmission line support member;

forming a guide hole, in which the guide pin is to be inserted, in the other one of the transparent substrate and the optical transmission line support member, in which the guide pin is not formed, such that the diameter of the guide hole is made larger as compared with the diameter of the guide pin;

arranging a jig having a protruding portion, which diameter is substantially the same as the diameter of the guide pin such that the protruding portion is being inserted into the guide hole;

filling up a gap between the protruding portion and the guide hole with a filler material, which is cured by carrying out a predetermined processing;

adjusting a position of the jig within a range in which the protruding portion is movable inside the guide hole;

curing the filler material by carrying out a predetermined processing to the filler material, which is filled up in the gap between the protruding portion and the guide hole; and

pulling out the protruding portion from the guide hole after having cured the filler material.

2. (Original) The manufacturing method of the optical module according to claim1, further comprising the step of mounting the optical transmission line support member on the transparent substrate such that the guide pin is being inserted into the guide hole, in which the filler material is cured already.

3. (Original) A method of manufacturing an optical module including a transparent substrate having an electro optical element on one surface side and an optical transmission line support member, which is arranged on the other surface side of the transparent substrate and supports one end of an optical transmission line, the method of manufacturing the optical module comprising the steps of:

forming a guide hole in either the transparent substrate or the optical transmission line support member;

forming a fitting hole, into which the guide pin is to be fitted, in the other one of the transparent substrate and the optical transmission line support member, in which the guide hole is not formed, such that the diameter of the fitting hole is made larger as compared with the diameter of the guide pin;

inserting a part of the guide pin into the fitting hole;

filling up a gap between the guide pin and the fitting hole with a filler material, which is cured by carrying out a predetermined processing;

adjusting a position of the guide pin within a range in which the guide pin is movable inside the fitting hole; and

curing the filler material by carrying out the predetermined processing to the filler material, which is filled up in the gap between the guide pin and the fitting hole.

4. (Original) The method of manufacturing the optical module according to claim 3, wherein the guide pin is inserted into the fitting hole such that, at least, a part of the guide pin is being inserted into a guide pin holding hole by a jig having the guide pin holding hole, which diameter is substantially the same as the diameter of the guide pin.

5. (Original) The method of manufacturing the optical module according to one of claim 3, further comprising the step of mounting the optical transmission line support member on the transparent substrate, such that the guide pin, which is fixed in the fitting hole by having cured the filler material, is being inserted into the guide hole.

6. (Original) A method of manufacturing an optical module including a transparent substrate having an electro optical element on one surface side and an optical transmission line support member, which is arranged on the other surface side of the transparent substrate and supports one end of an optical transmission line, the method of manufacturing the optical module comprising the steps of:

forming a guide pin in either the transparent substrate or the optical transmission line support member;

forming a guide hole, in which the guide pin is to be inserted, in the other one of the transparent substrate and the optical transmission line support member, in which the guide pin is not formed, such that the diameter of the guide hole is made larger to produce a gap between the guide pin and the guide hole when the guide pin is inserted into the guide hole;

mounting the optical transmission line support member on the transparent substrate such that the guide pin is being inserted into the guide hole;

filling up the gap between the guide pin and the guide hole with a filler material, which is cured by carrying out a predetermined processing;

adjusting a position of the optical transmission line support member within a range in which the guide pin is movable inside the guide hole; and

curing the filler material by carrying out the predetermined processing to the filler material, which is filled up in the gap between the guide pin and the guide hole.

7. (Original) A method of manufacturing an optical module including a transparent substrate having an electro optical element on one surface side, an optical transmission line support member, which is arranged on the other surface side of the transparent substrate and supports one end of an optical transmission line, and an optical coupling member, which is arranged on the other side surface of the transparent substrate and has a role of optical coupling the electro optical element with the optical transmission line, wherein the method of manufacturing the optical module comprising the steps of:

forming a guide pin in either the optical transmission line support member or the optical coupling member;

forming a guide hole, in which the guide pin is to be inserted, in the other one of the optical transmission line support member and the optical coupling member, in which the guide pin is not formed, such that the diameter of the guide hole is made larger to produce a gap between the guide pin and the guide hole when the guide pin is inserted into the guide hole;

mounting the optical transmission line support member on the transparent substrate such that the guide pin is being inserted into the guide hole;

filling up the gap between the guide pin and the guide hole with a filler material, which is cured by carrying out a predetermined processing;

adjusting a position of the optical transmission line support member within a range in which the guide pin is movable inside the guide hole; and

curing the filler material by carrying out the predetermined processing to the filler material, which is filled up in the gap between the guide pin and the guide hole.

8. (Original) The method of manufacturing the optical module according to one of claim 6, further comprising the step of pulling out the guide pin from the guide hole after having cured the filler material.

9. (Original) The method of manufacturing the optical module according to claim 1, wherein the filler material includes either a thermosetting adhesive or an optically-cured adhesive.

10. (Original) An optical module, comprising:

a transparent substrate, which has optical permeability to the wavelength of the light used;

an electro optical element, which is arranged on one surface side of the transparent substrate and radiates signal light toward the other surface side of the transparent substrate according to provided electrical signal, or which generates electrical signal according to the luminous intensity of signal light provided from the other surface side of the transparent substrate;

an optical transmission line support member, which is arranged on the other surface side of the transparent substrate and supports one end of an optical transmission line; and

an optical coupling member, which is arranged on the other surface side of the transparent substrate and performs optical coupling between the electro optical element and the optical transmission line, wherein either the transparent substrate or the optical transmission line support member has a guide pin, while the other one has a guide hole, in which the guide pin is to be inserted, and the diameter of the guide hole is made larger as compared with the diameter of the guide pin so that a gap is produced between the guide pin and the guide hole, and the gap between the guide pin and the guide hole is filled up with a predetermined filler material.

11. (Original) The optical module according to claim 10, wherein the optical transmission line support member supports the optical transmission line such that the extension direction of the optical transmission line becomes substantially parallel to the other surface side of the transparent substrate, and the optical coupling member has a reflective portion, which changes the course of signal light radiated from the electro optical element by substantially 90 degrees to be guided to the optical transmission line, or which changes the course of signal light radiated from the optical transmission line by substantially 90 degrees to be guided to the electro optical element, and the guide pin is arranged to be substantially orthogonal to the other surface side of the transparent substrate.

12. (Original) An optical module, comprising:

a transparent substrate which has optical permeability to the wavelength of the light used;

an electro optical element, which is arranged on one surface side of the transparent substrate and radiates signal light toward the other surface side of the transparent substrate according to provided electrical signal, or which generates electrical signal according to the luminous intensity of signal light provided from the other surface side of the transparent substrate;

an optical transmission line support member, which is arranged on the other surface side of the transparent substrate and supports one end of an optical transmission line; and

an optical coupling member, which is arranged on the other surface side of the transparent substrate and performs optical coupling between the electro optical element and the optical transmission line, wherein either the optical transmission line support member or the optical coupling member has a guide pin and the other one has a guide hole, in which the guide pin is to be inserted, and the diameter of the guide hole is made larger as compared with the diameter of the guide pin so that a gap is produced between the guide pin and the guide

hole, and the gap between the guide pin and the guide hole is filled up with a predetermined filler material.

13. (Original) The optical module according to claim 12, wherein the optical transmission line support member supports the optical transmission line such that the extension direction of the optical transmission line becomes substantially parallel to the other surface side of the transparent substrate, and the optical coupling member has a reflective portion, which changes the course of signal light radiated from the electro optical element by substantially 90 degrees to be guided to the optical transmission line, or which changes the course of signal light radiated from the optical transmission line by substantially 90 degrees to be guided to the electro optical element, and the guide pin is arranged to become substantially parallel to the extension direction of the optical transmission line.

14. (Currently Amended) The optical module according to claim ~~10~~11, wherein the optical coupling member further has a lens, which converges signal light radiated from the electro optical element to be guided to the reflective portion, or which converges signal light radiated from the optical transmission line and then reflected by the reflective portion to be guided to the electro optical element.

15. (Currently Amended) The optical module according to claim ~~10~~11, wherein the optical coupling member further has a first lens, which turns signal light radiated from the electro optical element into a parallel light to be guided to the reflective portion or which converges signal light radiated from the optical transmission line and then reflected by the reflective portion to be guided to the electro optical element, and a second lens which converges signal light radiated from the electro optical element and then reflected by the reflective portion to be guided to the optical transmission line, or which turns signal light radiated from the optical transmission line into a parallel light to be guided to the reflective portion.

16. (Currently Amended) The optical module according to claim ~~10~~11, wherein the optical coupling member further has a ~~third~~first lens, which turns signal light radiated from the electro optical element into a parallel light to be guided to the reflective portion, or which converges signal light radiated from the optical transmission line and then reflected by the reflective portion to be guided to the electro optical element, and the optical transmission line support member further has a ~~fourth~~ second lens which converges signal light radiated from the electro optical element and then reflected by the reflective portion to be guided to the optical transmission line, or which turns signal light radiated from the optical transmission line into a parallel light to be guided to the reflective portion.

17. (Original) The optical module according to claim 11, wherein the reflective portion has either a metal film or a dielectric multi- layered film.

18. (Original) A hybrid integrated circuit, comprising the optical module according to claim 10.

19. (Original) A hybrid circuit board, comprising the optical module according to claim 10.

20. (Original) An electronic apparatus, comprising the optical module according to claim 10.

21. (Original) A method of manufacturing an opto-electricity mixed device,including:

a circuit board, having a conductive film transmitting electrical signal and an optical transmission line having a roll of transmitting signal light; and

a hybrid integrated circuit chip, which is coupled to the circuit board and has a role of conversion between the electrical signal and the signal light, wherein the method of manufacturing the opto-electricity mixed device comprising the steps of:

forming a guide pin in either the hybrid integrated circuit chip or the circuit board;

forming a guide hole in the other one of the hybrid integrated circuit chip and the circuit board, in which the guide pin is to be inserted, such that the diameter of the guide hole is made larger as compared with the diameter of the guide pin;

arranging a jig having a protruding portion on top of the circuit board, which diameter is substantially the same as the diameter of the guide pin, such that the protruding portion is being inserted into the guide hole;

filling up the gap between the protruding portion and the guide hole with a filler material, which is cured by carrying out a predetermined processing;

adjusting a position of the jig within a range in which the protruding portion is movable inside the guide hole;

curing the filler material by carrying out the predetermined processing to the filler material, which is filled up in the gap between the protruding portion and the guide hole; and

pulling out the protruding portion from the guide hole after having cured the filler material.

22. (Original) A method of manufacturing an opto-electricity mixed device, including a circuit board having a conductive film transmitting electrical signal and an optical transmission line transmitting signal light, and a hybrid integrated circuit chip, which is coupled to the circuit board and converts the electrical signal into signal light, vice versa, the method of manufacturing the opto-electricity mixed device comprising the steps of:

forming a guide pin in either the hybrid integrated circuit chip or the circuit board;

forming a guide hole, in which the guide pin is to be inserted, in the other one of the hybrid integrated circuit chip and the circuit board, and which diameter is made larger so that a gap is produced between the guide pin and the guide hole when the guide pin is inserted into the guide hole;

mounting the hybrid integrated circuit chip on top of the circuit board such that the guide pin is being inserted into the guide hole;

filling up the gap between the guide pin and the guide hole with a filler material, which is cured by carrying out a predetermined processing;

adjusting a position of the hybrid integrated circuit chip within a range in which the guide pin is movable inside the guide hole; and

curing the filler material by carrying out the predetermined processing to the filler material, which is filled up in the gap between the guide pin and the guide hole.

23. (Original) The manufacturing method of the opto-electricity mixed device according to one of claim 21, wherein the hybrid integrated circuit chip comprises a transparent substrate having optical permeability to the wavelength of the light used, and an electro optical element which is arranged on one surface side of the transparent substrate and radiates signal light toward the other surface side of the transparent substrate according to provided electrical signal, or which generates electrical signal according to the luminous intensity of signal light provided from the other surface side of the transparent substrate, and either the guide pin or the guide hole is formed on the transparent substrate.

24. (Original) An opto-electricity mixed device, comprising:

a circuit board having a conductive film transmitting electrical signal and an optical transmission line transmitting signal light; and

a hybrid integrated circuit chip, which is coupled to the circuit board and converts the electrical signal into the signal light, or vice versa, wherein either the circuit board or the hybrid integrated circuit chip has a guide pin, and the other one has a guide hole, in which the guide pin is to be inserted and which diameter is made larger as compared with the diameter of the guide pin so that a gap is produced between the guide pin and the guide hole, and the gap between the guide pin and the guide hole is filled up with a predetermined filler material.

25. (Original) The opto-electricity mixed device according to claim 24, wherein the hybrid integrated circuit chip comprises:

a transparent substrate, which has optical permeability to the wavelength of the light used, and

an electro optical element, which is arranged on one surface side of the transparent substrate and radiates signal light toward the other surface side of the transparent substrate according to provided electrical signal, or which generates electrical signal according to the luminous intensity of signal light provided from the other surface side of the transparent substrate, wherein the guide pin or the guide hole is formed on the transparent substrate.